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CONFERENCE OF THE EIGHTEEN-NATION COMMITTEE ON DISARMAMENT

ENDC/227
16 July 1968
ENGLISH
Original: RUSSIAN

MEMORANDUM BY THE GOVERNMENT OF THE USSR ON SOME URGENT MEASURES FOR STOPPING THE ARMS RACE AND FOR DISARMAMENT

Since the very first days of its existence, the Soviet State has based its foreign policy on the struggle against the imperialist policy of aggression and war, the struggle to secure peace among the nations. Following the course mapped out by V.I. Lenin, the Soviet Government has perseveringly and consistently come out in favour of implementing a broad programme of measures for stopping the arms race and for disarmament, in favour of translating into reality a plan of general and complete disarmament.

The active efforts of socialist countries, and of all peace-loving States, have resulted in a series of practical steps aimed at limiting the scope of the nuclear arms race and achieving disarmament. The Moscow Treaty banning nuclear-weapon tests in the atmosphere, in outer space and under water was followed by the Treaty on the Principles Governing the Activities of States in Outer Space, which blocked the way to outer space for nuclear weapons. Now drafted and ready for signature is the Treaty on the Non-Proliferation of Nuclear Weapons, which is of great importance for strengthening peace and creating favourable conditions for further efforts to stop the arms race and to implement effective measures for banning and destroying nuclear weapons.

The interests of safeguarding peace demand further steps to restrict the arms race and to achieve disarmament. This is the more important since, as a result of the intensified activities of aggressive circles, international tension has increased, the aggressive war waged by the United States in Viet-nam is growing in scope and the occupation by Israel of the territories, seized by force, of a number of Arab States continues.

After the conclusion of the Treaty on the Non-Proliferation of Nuclear Weapons, the Soviet Government proposes that agreement should be reached to implement in the very near future the following urgent measures aimed at stopping the nuclear arms race and achieving disarmament.

1. Prohibition of the use of nuclear weapons

Since the emergence of nuclear weapons, the Soviet Union has consistently advocated the prohibition and complete destruction of these weapons of mass annihilation. The conclusion of an international agreement banning the use of nuclear weapons would be an important step towards the solution of this problem and towards the removal of the threat

of nuclear war. Such an agreement would be a serious deterrent to all those who might wish to resort to nuclear weapons. By allaying the apprehensions of some States as to the intentions of others regarding the use of nuclear weapons, such an agreement would be conducive to the establishment of a healthy international atmosphere.

To facilitate a speedy solution of this problem, the Government of the USSR proposed for the consideration of the United Nations General Assembly at its twenty-second session a draft convention on the prohibition of the use of nuclear weapons. A significant majority of the delegations at the Assembly concurred with the idea of the need for such an international convention. The Assembly called upon all States to examine the draft convention on the prohibition of the use of nuclear weapons proposed by the Soviet Union as well as such other proposals as might be made on this question, and to conduct negotiations concerning the conclusion of an appropriate convention either through the convening of an international conference, or in the Eighteen-Nation Committee on Disarmament, or directly between States.

With a view to obtaining a practical solution of the question of the prohibition of the use of nuclear weapons, the Soviet Government proposes that the Eighteen-Nation Committee on Disarmament discuss as a matter of high priority the draft convention on the prohibition of the use of such weapons and exchange opinions on the convening of an international conference to sign an appropriate convention.

2. Measures for stopping the manufacture of nuclear weapons and for reducing and destroying stockpiles

Desiring to deliver mankind from the danger of nuclear war, the Soviet Government proposes that all nuclear Powers should forthwith enter into negotiations on stopping the manufacture of nuclear weapons, and on the reduction of stockpiles, to be followed by the complete prohibition and destruction of nuclear weapons under appropriate international control. The Soviet Government declares its readiness to start such negotiations with all other nuclear Powers at any time. In so doing, the Soviet Government considers that in the course of such negotiations agreement may be achieved both on the whole package of measures leading to the destruction of nuclear weapons and on some of the measures designed to achieve that aim.

3. Limitation and subsequent reduction of means of delivery of strategic weapons

The Soviet Government proposes that agreement should be reached on definite steps for the limitation and subsequent reduction of strategic means of delivery of nuclear weapons. The Soviet Government considers that the destruction of the whole arsenal of

strategic means of delivery, or at any rate the reduction of that arsenal to an absolute minimum, leaving -- and that only temporarily -- no more than a strictly limited quantity of such means of delivery, would be a measure conducive to the removal of the threat of nuclear war.

The Soviet Government declares its readiness to undertake an exchange of views with the States concerned on the mutual limitation and subsequent reduction of strategic means of delivery of nuclear weapons.

4. Prohibition of flights beyond national borders of bombers carrying nuclear weapons. Limitation of navigation zones for rocket-carrying submarines

The Soviet Government has repeatedly drawn the attention of the Governments of other States and of world public opinion to the danger inherent in the flights of bombers with nuclear weapons on board beyond national borders. The increased number of accidents involving United States bombers with nuclear weapons on board outside the territory of the United States is a matter of legitimate concern to various countries. There is no guarantee that the next accident to a bomber armed with nuclear bombs will not result in a nuclear explosion, with all the ensuing consequences. In the present state of tension, such a nuclear explosion may lead to a whole series of grave events, to a conflict dangerous for all mankind. From the military point of view, such flights of bombers, given the existence of rockets carrying nuclear warheads, are devoid of sense. They can have but one aim -- to increase international tension, regardless of the consequences of such a dangerous practice.

The Soviet Government proposes that flights beyond national borders of bombers with nuclear weapons on board should be banned without delay.

In order to reduce the risk of nuclear war, the Soviet Government also proposes that agreement should be reached to the effect that patrolling by submarines carrying nuclear missiles should be prohibited in areas from which the missiles can reach the frontiers of the contracting parties.

5. Ban on underground nuclear-weapon tests

The Soviet Union has been and continues to be a steadfast advocate of the prohibition of all nuclear-weapon tests, believing that the banning of all tests will promote the consolidation of peace and the slackening of the arms race. The Soviet Government is prepared to reach agreement without delay on the banning of underground nuclear-weapon tests on the basis of the use of national means of detection to control observance of the ban.

6. Prohibition of the use of chemical and bacteriological weapons

The Soviet Government has on several occasions drawn the attention of States to the threat posed for mankind by the use of chemical and bacteriological weapons. Voicing the general concern of nations over such a threat, the United Nations General Assembly at its twenty-first session adopted a resolution calling for strict observance by all States of the principles of the Geneva Protocol of 1925 for the prohibition of the use of chemical and bacteriological methods of warfare, condemning all actions contrary to that objective and inviting all States to accede to the Geneva Protocol.

By some countries, however, chief among them the United States of America, this important decision of the General Assembly is not being carried out. What is more, the United States is using chemical weapons in its aggressive war in Viet-nam. The Soviet Government therefore proposes that the Eighteen-Nation Committee should consider ways and means of securing the observance by all States of the Geneva Protocol for the prohibition of the use of chemical and bacteriological methods of warfare.

7. Elimination of foreign military bases

Foreign military bases in the territories of other States are a serious danger to peace. Such bases are a source of military conflicts and a threat to the freedom and independence of peoples. This is convincingly proved by the continuing aggressive war of the United States in Viet-nam and by the tension and conflicts in other parts of the world where foreign bases are situated.

The Soviet Government proposes that, in accordance with the mandate given by the United Nations General Assembly at its twenty-first session, the Eighteen-Nation Committee on Disarmament should give urgent consideration to the question of the elimination of foreign military bases.

8. Measures for regional disarmament

The Soviet Government is in favour of establishing denuclearized zones in various parts of the world. It is of the opinion that the creation of such zones should effectively limit the area of distribution of nuclear weapons and be fully consistent with the objective of preventing their direct or indirect proliferation.

The Soviet Government considers that not only groups of States embracing whole continents or large geographical areas but also more limited groups of States and even individual countries may assume obligations to establish denuclearized zones.

The Soviet Government also supports proposals concerning the implementation of measures for regional disarmament and for the reduction of armaments in various parts of the world, including the Middle East. The question of such measures to restrict the arms race in the Middle East could, of course, be considered only subject to the elimination of the consequences of the Israel aggression against Arab countries and, above all, subject to the complete withdrawal of Israel troops from the territories of Arab countries occupied by them.

9. Peaceful uses of the sea-bed and ocean floor

The interests of the restriction of the arms race are also served by the limitation of the military uses of the environments in which man lives and works and by the prevention of the extension of such uses to new spheres of human activity. The Soviet Government has consistently striven and is still striving towards the achievement of these goals, and it is gratified to note that important practical steps in this direction are to be found in the relevant limitations embodied in the Antarctic Treaty and in the Treaty on the Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies.

The progress of research and the prospects for the development of the sea-bed and the ocean floor make it possible to raise the question of giving timely expression in appropriate form, to a regime such as would ensure the utilization of the sea-bed beyond the limits of the present territorial waters solely for peaceful purposes. That would, in particular, involve the prohibition of the establishment of fixed military installations on the sea-bed, as well as other activities of a military nature. The Soviet Government proposes that the Eighteen-Nation Committee should start negotiations on the question of the utilization exclusively for peaceful purposes of the sea-bed beyond the limits of the present territorial waters.

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In proposing the above measures, the Soviet Government draws attention to the need for making every effort to achieve concrete results in solving the problem of general and complete disarmament. The Soviet Government deems it necessary to give a new impetus to the negotiations on this question in the Eighteen-Nation Committee on Disarmament. At the same time it is in favour of the implementation of the United Nations General Assembly's decision concerning the holding of a world disarmament conference, and it is

confident that the convening of such a conference will contribute to the solution of this most important problem confronting mankind.

Guided by its position of principle in questions concerning the struggle for peace, the Soviet Union, in co-operation with the socialist countries and with all peace-loving States, will work for removing the threat of nuclear war, for curbing the forces of aggression and for carrying out a broad programme of disarmament. The Soviet Government calls upon all States to do all that is necessary to achieve agreement on urgent measures for stopping the arms race, and on disarmament.

CONFERENCE OF THE EIGHTEEN-NATION COMMITTEE ON DISARMAMENT

ENDC/228
16 July 1968
Original: ENGLISH

UNITED STATES OF AMERICA

Message of President Johnson to the
Eighteen-Nation Committee on Disarmament

Your conference has achieved singular success in negotiating the Non-Proliferation Treaty. The Treaty is a major step toward a goal which the United States has been seeking since the dawn of the nuclear age. It is a triumph of sanity in international affairs and a testament to man's will to survive.

The world looks today for a beginning of the negotiations called for by the Treaty — "negotiations in good faith on effective measures relating to cessation of the nuclear arms race at an early date and to nuclear disarmament...".

This is the most pressing task which the treaty lays on its parties, and the nations meeting in Geneva today share a major responsibility in performing it. The United States takes this responsibility with the utmost seriousness.

High on the disarmament agenda of mankind is the need to halt the strategic arms race. Agreement has been reached between the Governments of the Union of Soviet Socialist Republics and the United States to enter in the nearest future into bilateral discussions on the limitation and the reduction of both offensive strategic nuclear weapons delivery systems and systems of defence against ballistic missiles. It is expected that the two sides will shortly reach a decision on the time and place for talks.

In the absence of agreement, the nuclear arms race could escalate to new levels. This would only result in higher and higher destructive power on each side and vast diversion of resources from peaceful pursuits - with no increase in security for anyone.

If we can make progress on limiting strategic delivery systems, the United States would be prepared to consider reductions of existing systems. By reducing these systems, we would cut back effectively - and for the first time - on the vast potentials for destruction which each side possesses.

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The United States and the Soviet Union have a special responsibility to head off a strategic arms race. The fate of mankind could well depend on the manner in which our two nations discharge that responsibility.

Progress on limiting strategic delivery systems will also facilitate the achievement of various related measures of nuclear arms control and disarmament. A number of such measures has been suggested by the United States. Additional measures have been proposed by other nations and recommended by the General Assembly of the United Nations. The United States hopes that your conference will soon be able to make significant progress on measures which have been the subject of past discussions. But these are not the only subjects of interest to the conference.

We must soon take up the question of arms limitations on the seabed in the light of the consideration being given by the General Assembly's Ad Hoc Committee on the Seabeds to a number of proposals for arms limitations on the seabed. Your conference should begin to define those factors vital to a workable, verifiable and effective international agreement which would prevent the use of this new environment for the emplacement of weapons of mass destruction.

Meaning must soon be given to the language of the Non-Proliferation Treaty dealing with sharing potential benefits from any peaceful applications of nuclear explosions. In the view of the United States, the International Atomic Energy Agency is the "appropriate international body" through which the non-nuclear-weapon parties to the treaty may obtain these benefits under Article V of the Treaty if they choose to do so. We also believe that the IAEA is the appropriate forum for development of procedures and agreements relating to the furnishing of the peaceful nuclear explosive services obtained through the IAEA.

Finally, we must be alert to opportunities for achieving regional limitations on armaments. We have seen that co-operation at the regional level to limit armaments is not only possible but is in fact a promising path to progress. The Treaty of Tlatelolco is a worthy example of what can be achieved when neighbours collaborate in safeguarding their national security interests and in promoting their common welfare. In signing Protocol II of the Treaty of Tlatelolco, the United States had demonstrated its intention to respect the denuclearized status of Latin America which will be established by that Treaty. We hope that all nuclear powers will respect this great achievement of Latin American diplomacy.

We have also seen the consequences of the failure of nations to effect regional arrangements to inhibit the growth of arsenals of conventional weapons. Resources continue to be diverted from critical human needs to the acquisition of armaments and the maintenance of military establishments that in themselves feed fears and create insecurity among nations.

The United States attaches particular importance to halting non-nuclear arms races. We must achieve regional limitations on conventional armaments.

Representatives of the United States are under standing instructions to search out any initiatives for regional restraints coming from the areas concerned. If arrangements acceptable to the nations involved can be concluded, they will be respected by the United States. We stand ready to support any reasonable measure affecting the activities of the major weapons-producers that would make a regional agreement more effective, including a requirement that suppliers publicize or register their arms shipments to a particular region.

CONFERENCE OF THE EIGHTEEN-NATION COMMITTEE ON DISARMAMENT

ENDC/229
16 July 1968
Original: ENGLISH

UNITED KINGDOM

Message to the Eighteen-Nation Committee on Disarmament from the Prime Minister of the United Kingdom, The Right Honourable Harold Wilson, M.P.

At its last session the 18-Nation Disarmament Committee's long and patient labours on the Non-Proliferation Treaty were finally crowned with success and with the opening of the Treaty for signature the Committee will be free to turn its attention to other measures of arms control and disarmament. This is a tremendous opportunity which must be exploited to the full. I am sure the Disarmament Committee will be equal to its responsibilities and trust that in its present session it will initiate work that will enable further steps to be taken on the long road that leads to general and complete disarmament.

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CONFERENCE OF THE EIGHTEEN-NATION COMMITTEE ON DISARMAMENT

ENDC/230
29 July 1968
ORIGINAL: ENGLISH

SWEDEN

Letter dated 29 July 1968 from the Representative of Sweden to the Special Representative of the Secretary-General of the United Nations

Enclosed with this letter you will find a copy of a press release issued by the International Institute for Peace and Conflict Research in Stockholm on June 29, 1968, regarding two meetings of seismological experts which took place in Sweden in April and June of this year. Attached to the press release is a Summary Report, adopted by this group of experts on seismic methods for monitoring underground explosions.

The International Institute for Peace and Conflict Research in Stockholm (SIPRI) is a non-governmental international institution, which was set up two years ago through a decision of the Swedish Parliament which also allocates the main funds for its activities. The governing bodies and the personnel of the Institute are, however, international. The Swedish Government is thus not involved in or responsible for the actions or publications of the Institute.

As this documentation would seem to be of interest to other delegations in the ENDC I hereby request you to circulate this letter with the enclosed press release and Summary Report as an ENDC -document.

(signed) Alva Myrdal
Chairman of the Delegation

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68-18547

SIPRI
INTERNATIONAL INSTITUTE FOR PEACE AND CONFLICT RESEARCH
Sveavägen 166, 113 46 Stockholm, Tel. 34 96 00

Press Release

Stockholm, June 29, 1968, at 2 p.m.

The group of seismological experts from 10 countries including four nuclear powers which met at Tällberg, Dalarna, last Monday adjourned yesterday after having unanimously adopted a joint report assessing today's state of the art of seismic test ban verification. The meeting was the second of two by the Stockholm International Peace Research Institute (SIPRI).

The plan is to publish the experts' report as soon as possible preferably before the resumption of the Geneva disarmament conference on July 16, in order to provide a technical background for those who have to make political judgements in different countries.

The main feature of the report is the recognition that it is now possible to distinguish large and medium-sized underground explosions from interfering earthquakes. This provides a new situation in test ban control. The report includes no political judgement of the sufficiency of available capabilities.

An assessment of the state of the art of seismic test ban control cannot alone indicate whether sufficient security can be achieved or not. But it is a necessary ingredient for political decision-making. Other ingredients are assessments of the security risks of cheating by the other parties if it is not disclosed, the need for additional measures as on-site-inspections, the military significance of difficult-to-disclose small tests, and the general feasibility of stopping all testing and by that restricting weapons development. This last point is closely related to procurement of ABM systems.

Seismic methods for monitoring underground explosions: An assessment of the Status and Outlook

Summary of Report of SIPRI Seismic Study Group, April and June 1968

Considerable progress in the field of detection and identification of underground explosions and earthquakes has been made since 1960, when technical talks

were held on this subject in Geneva. At that time the prospect of identification of explosions as such was considered remote. On the initiative of SIPRI an expert study group was convened to review and assess the present possibilities of detection and identification by seismological means alone of underground explosions and earthquakes. In the work of the group, seismologists from the following ten countries took part:

Canada
Czechoslovakia
France
India
Japan
Rumania
Sweden
Union of Soviet Socialist Republics
United Kingdom
United States of America

The study group considered these developments in order to assess the state of the art in different countries, to find areas of consensus, to probe unclear or controversial areas and to point out promising areas for further research and development. One of the main tasks of the group was to examine the usefulness of networks for the detection and identification by seismological means only of underground explosions. The members of the study group presented the most recent results and arrived at the conclusions summarized below.

(1) Since 1960 improvements in the fields of instrumentation, seismological theory and interpretation of observations have been achieved, and networks of standardized instruments (reporting to data centres, for example the I.S.C. at Edinburgh and B.C.I.S. at Strasbourg) have been deployed. Research and development of this type had been recommended by the Geneva Conference of Experts. This and other encouragement to research has led to the establishment of several seismological networks and stations. Two of them are particularly large and homogeneous, one consisting of about 100 widespread single stations. One of these systems is the national system deployed on the territory of the USSR. The other, the so-called WWSSN (World Wide Standard Seismological Network) system, is on the territories of the USA and many other countries of the world. The former system is within the territory of the USSR, whereas the latter is external to the USSR and is worldwide.

This distribution results in the better capability of the latter system to detect and identify underground explosions of interest. In addition ten arrays */ have been established for research purposes, some of which contribute data to international data centres.

(2) It was reported that the problems of detection using body waves by such networks as WWSSN and contributing arrays are less severe than those involved in identification. American and British participants reported that identification by the WWSSN network is possible for explosions in the Northern Hemisphere down to the level of 20 to 60 kilotons exploded in hard rock like granite. This progress has depended on the traditional seismological data exchange between countries.

(3) Both major systems mentioned in paragraph 1 are able to locate within 10 to 40 kilometers the site of explosions in the range of yields mentioned above.

(4) It was however recognized that for explosions in less dense materials, like Nevada tuff (a porous volcanic rock) and alluvium, the yield corresponding to the identification limit mentioned above would be increased two (tuff) to ten times (alluvium), depending in the latter case on the water content. The maximum possible yield in alluvium would be limited by the thickness of the alluvium layer, and by the possible requirement to prevent cratering. For example, if the layer is 450 meters thick, the maximum fully contained yield would be of the order of 20 kilotons.

(5) Another case of reduced signal strength is that of an explosion in a specially prepared underground cavity. Small scale experiments in the USA and UK have been made during the last few years, the largest of which was reported to be a nuclear explosion of 0.35 kilotons. All confirmed the theoretically predicted reduction of signal strength by a factor of about one hundred. It was recognized that there may be considerable practical limitations to do this with yields above 10 kilotons. Some participants expressed the opinion that large decouplod explosions might be detected by radioactive leakage, subsidence craters and by other means.

(6) Although the emergence of a method for positive identification of explosions has made the annual number of corresponding earthquakes less important than in the past, earthquake statistics are still pertinent to the problems associated with an

*/ An array is a complex of seismometers spread over a wide area and connected to a central point.

underground test ban. The worldwide yearly number of earthquakes corresponding to a 20 kiloton explosion in tuff, has been observed to be about 2000. The number corresponding to 2 ± 1 kilotons exploding in granite, was estimated to be somewhere between ten and twenty thousand. These observations and estimates are based on four years of observations, obtained from the data centre of the WWSSN. The Soviet data indicate that these numbers of earthquakes should be reduced by a factor of two. The large numbers of earthquakes at the lower yield equivalence would be expected to cause some problems of interference.

(7) The criterion providing the method of positively identifying explosions by seismological means alone employs the difference in the relative excitation of body and surface seismic waves between explosions and earthquakes. */ This technique requires that seismic waves from explosions are not masked by signals from other events.

(8) At the yields referred to above (20-60 kilotons in granite), the measurements of these seismic waves recorded by the WWSSN network give a clear separation of explosions and earthquakes. The existing experimental evidence on the usefulness of the surface wave method for identification of explosions with lower yields is as yet inconclusive. The long period instruments in the WWSSN are not sensitive enough to record the surface waves from low yield explosions at great distances. UK, Canadian, American and USSR research indicates separation of explosions and earthquakes down to 10 kilotons in hard rock. Studies at shorter distances are inconclusive as to the validity of this discriminant for yields below 10 kilotons in hard rock.

(9) The majority of the participants believe that other criteria, such as
Depth at which the event takes place,
Direction of the first ground motion at recording stations,
Frequency content of seismic waves,
Excitation of shear waves,
Complexity of the seismic record

*/ A surface wave is a wave of long period running along the surface of the Earth; a body wave is a short-period wave running through the deep interior of the Earth.

do not at present provide positive identification. However, ideas were presented on how such criteria could be combined, by standard statistical procedures, for more effective utilization of the data.

(10) Improvements in identification can be expected in the foreseeable future from application of current research results. Immediate improvement of existing networks could be obtained, for example by moving stations from disturbed to quiet locations or establishing satellite stations in certain cases. A similar example of a more costly improvement would be the installation of about thirty highly sensitive long period seismographs, of a kind only recently developed, at certain stations of the WWSSN network. It would lower the detection threshold for surface waves by a factor of about ten but the discriminant is at present unproved below 10 kilotons in hard rock.

In addition the implementation of more arrays would make it possible to conduct research into whether the identification of explosions in the 2-10 kT range in granite is possible, and would enable the design of suitable monitoring systems if the results so warrant.

(11) Implicit in the projections above are recommendations for network developments based on present research results.

(12) The group also saw that the following fields for research could be profitable:

(a) methods of improving surface wave detection

(b) more detailed work on the relative excitation of body and surface waves by earthquakes and explosions

(c) pattern recognition of seismic records

(d) statistical treatment of identification criteria for decision applications.

(13) The effectiveness of this programme of research, as well as progress in the efforts to lower the thresholds of detection and identification, would be greatly increased if existing networks could merge into one worldwide data exchange system.

L. Constantinescu
U. Ericsson
E. Herrin
V. Kárník
P. Mechler
S. Miyamura
I. Pasechnik
F. Press
H. Thirlaway
K. Whitham
T. Varghese

Tällberg, Sweden, June 28, 1968.